

Remarks

Double Patenting

With reference to page 2 of the Office Action, claims 1 to 2, 4 and 7 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 15 of U.S. Patent No. 6,689,438 (Kennedy).

Attached is a terminal disclaimer disclaiming any portion of the term of a patent issuing from the present application, that would exceed the term of U.S. Patent No. 6,689,438.

35 U.S.C. §103

On page 3 of the Office Action, claims 1 to 2 and 4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Speer et al. (US 5529833) in view of Putnam et al. (US 6794191).

Applicants respectfully traverse these rejections to the extent they are applied to the claims as now presented.

Applicants submit that no new matter has been added. Support for amended claim 1 and newly added claim 31 can be found at e.g. page 6, lines 8 to 29, and page 8, line 32 to page 9, line 18 of the specification.

The Office Action states that Speer does not disclose an oxygen indicator comprising a luminescent compound. Putnam is cited in the Office Action for the teaching of

an oxygen indicator in a polymer film (column 2, lines 54-67) laminated on a barrier film (column 3, lines 55-61), wherein the oxygen indicator has a luminescent compound (column 5, lines 10-20) for use in food packaging as an inner or outer layer (column 6, lines 1-15) for the purpose of accurately detecting oxygen in packaging.

Applicants respectfully submit that Putnam is concerned with the headspace oxygen *inside the package*, not the oxygen concentration in the packaging material itself. For example, at column 1, lines 22 to 27 of the reference, Putnam et al. teach that

[t]here are no available technologies that provide a practical means **for measuring in-package oxygen** on a real time basis. In addition to packaging, many potential applications for oxygen sensing **inside containers** would benefit from the use of low-cost and sensor-containing barrier polymeric films.

[emphasis added]

The reference here is to oxygen “in-package”, i.e. inside the package; not, for example, “in the packaging material”. The teaching here is also to sensing oxygen “inside containers”, not for example to “inside the material forming the container”.

In further support of this interpretation, Applicants refer to Putnam et al.’s teaching, at column 6, lines 1 to 15, that

[I]n a preferred embodiment for packaging applications to determine the oxygen within a sealed environment, a thin film indicator polymer layer made by the inventive process is incorporated into a package or vessel lidding material having an outer oxygen barrier layer, and additionally juxtaposed on the side internal to the package, an oxygen-permeable food safe contact layer.

Applicants submit that this teaching from Putnam et al. is a reference to the determination of the oxygen “within” a sealed environment, i.e. the container or package. That Putnam et al. are interested in determining headspace oxygen is consistent with their use of an oxygen-permeable food safe contact layer. The permeability of this layer allows the headspace oxygen inside the container to interact with the oxygen indicator in the container material.

This effect is the opposite of that now claimed. The present invention is configured specifically to shield the oxygen indicator from the effects of oxygen, deriving either from the headspace inside the container, or the oxygen in the external atmosphere, so that the oxygen indicator can respond to the presence or absence of oxygen within the rigid container itself.

On page 4 of the Office Action, claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Speer et al. (US 5529833) in view of Putnam et al. (US 6794191), and further in view of Inoue et al. (US 5358876).

Applicants respectfully traverse these rejections to the extent they are applied to the claims as now presented.

Applicants rely on the comments above with respect to Putnam et al.

Inoue et al. use an oxygen indicator for indicating the presence or absence of oxygen “in a gaseous atmosphere” (see column 1, lines 10 to 12; see also column 14, lines 29 to 30 at claim 1). The reference contemplates head space scavenging of a gaseous medium inside a package. This is clear for example with reference to column 4, lines 14 to 19, where Inoue et al. teach that

[w]hen the oxygen indicator composition is printed on a package bag or container, it is preferably printed on the inside of an [sic] transparent film having an oxygen barrier property, followed by laminating a film having an oxygen permeability of not less than 1000 ml/m²-Atm-day on the indicator layer.

Thus, Inoue et al. position a film with a relatively high oxygen transmission rate next to their oxygen indicator. See also column 4, lines 31 to 34, where Inoue et al. teach that the oxygen indicator is placed in an oxygen permeable bag. Such teachings are consistent with the goal of Inoue et al., to indicate the presence of oxygen in the gaseous atmosphere of the headspace inside the package. However, this would not substantially shield the oxygen indicator from oxygen in any headspace within the container. It would do just the opposite.

Applicants respectfully ask for allowance of the claims as now submitted.

If any fees are deemed due, please charge same to Deposit Account No. 07-1765.

Respectfully submitted,

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